

What is claimed is:

1. A photocurable and antistatic resin composition for coating an optical fiber, comprising (A) a photopolymerizable urethane acrylate oligomer, (B) a reactive monomer having at least one (meth)acrylate or vinyl group, (C) a photoinitiator, and (D) an antistatic agent compatible with the oligomer and the monomer, wherein the photopolymerizable urethane acrylate oligomer (A) is derived from an urethane reaction of a mixture comprising (i) a polyol copolymer mixed with a sorbitan fatty acid ester or polyoxyethylene sorbitan fatty acid ester, (ii) a polyisocyanate, (iii) a hydroxy(meth)acrylate, (iv) an urethane reaction catalyst and (v) a polymerization initiator.
2. The resin composition of claim 1, wherein the components (A) to (D) are employed in amounts of 40 to 70 % by weight, 15 to 50 % by weight, 0.5 to 10 % by weight, and 1 to 30 % by weight, respectively, based on the total weight of the composition.
3. The resin composition of claim 1, which further comprises (E) a pigment or dye.
4. The resin composition of claim 3, wherein the pigment or dye is employed in an amount of 1 to 10 % by weight of the total resin composition.
5. The resin composition of claim 1, wherein the components (i) to (v) are employed in amounts of 25 to 50% by weight, 20 to 40 % by weight, 20 to 35 % by weight, 0.01 to 1 % by weight, and 0.01 to 1 % by weight,

respectively, based on the mixture for the urethane reaction.

6. The resin composition of claim 1, wherein the sorbitan fatty acid ester is selected from the group consisting of sorbitan monolaurate, sorbitan monopalmitate, sorbitan monostearate, sorbitan tristearate, sorbitan monooleate, sorbitan sesquioleate, sorbitan trioleate, and a mixture thereof.
7. The resin composition of claim 1, wherein the sorbitan fatty acid ester is employed in an amount of 1 to 5 % by weight of the polyol polymer.
8. The resin composition of claim 1, wherein the antistatic agent is selected from the group consisting of a non-ionic or cationic amine, a polyhydric alcohol fatty acid ester, a fatty amide, an alkyl betain and a mixture thereof.